

REMARKS

Claims 1 and 3-19 are pending herein. Claim 19 is a new claim and is comprised of original Claims 1-5. No new matter has been added. In view of the above claim addition and the following remarks, Applicant requests reconsideration and allowance of all pending Claims.

The Examiner rejected Claims 1 and 3-18 under 35 USC §103(a) as being unpatentable over Ham in view of Chisum, Venalainen '368 and Weidmann et al. Applicant traverses these rejections for the reasons stated below.

The present invention is for a device and method for measuring alignment of a vehicle.

Independent Claim 1 recites a measurement apparatus for vehicle body alignment work comprising an alignment table (10) to whose fastenings (11a₁, 11a₂, 11a₃, 11a₄) the vehicle is attached for the time of the alignment work, a measurement unit (17a₁, 17a₂) of which measurement apparatus (15) can be moved in a vertical guide (15b₁, 15b₂), which vertical guide (15b₁, 15b₂) can further be moved in a longitudinal guide (15a₁, 15a₂), and which measurement unit (17a₁) is provided with a movable measurement arm (40), wherein the measurement arm (40) comprises an articulation (41) to which a first arm part (42) is connected such that the first arm part (42) is pivoted on support of the articulation (41) with respect to the measurement arm (40), and that to the first arm part (42) is connected a second arm part (43) which is turned around its longitudinal axis (X₃₀), to which second arm part (43) a measurement head (65) is connected either directly or through an intermediate part; and means for extending the first and second arm parts (42, 43) in the direction of a longitudinal axis (X₂₀) of the first arm part (42) such that the second arm part (43) can be displaced with respect to the first arm part (42) to different length positions; wherein said first arm part (42) is connected to said articulation (41) by a connection assembly including a plurality of spaced holes each of the holes corresponding

to a selected angular position and ball means for receipt within said a selected one of said plurality of holes for locking said first arm (42) in a selected angular position so that said first arm part (42) can be moved to a plurality of select Registration No. 44,963 ed angular positions and locked in a desired selected angular position; and wherein said second arm part (43) is connected to said first arm part (42) by a connection assembly including a plurality of spaced holes each of the holes corresponding to a selected rotary position and ball means for receipt within said a selected one of said plurality of holes for locking said second arm part (43) in a selected rotary position so that said second arm (43) can be rotated with respect to said first arm part (42) and locked in a desired selected rotary position.

Independent Claim 9 recites a method for using the device of Claim 1.

Independent Claim 11 recites a measurement apparatus for use in vehicle body alignment work when a vehicle to be aligned is in place on an alignment table and attached thereto by means of fastenings, said apparatus comprising: measurement unit structured and arranged to be movable within a vertical guide, wherein said vertical guide is structured and arranged to be movable within a longitudinal guide; said measurement unit having a movable measurement arm comprising a first arm part, having a first arm part longitudinal axis, pivotally connected to said measurement arm via an articulation at a first end of said first arm part, and a second arm part slidably insertable within said first arm part, having a second arm part longitudinal axis, operatively connected at a second end to said first arm part, wherein said connection between said first arm part and said second arm part is such that said second arm part is rotatable about said second arm part longitudinal axis; a measurement head operatively coupled to a second end of said second arm part; wherein said first arm part is connected to said articulation by a connection assembly including a plurality of spaced holes each of the holes corresponding to a

selected angular position and ball means for receipt within said a selected one of said plurality of holes for locking said first arm in a selected angular position so that said first arm part can be moved to a plurality of selected angular positions and locked in a desired selected angular position; and wherein said second arm part is connected to said first arm part by a connection assembly including a plurality of spaced holes each of the holes corresponding to a selected rotary position and ball means for receipt within said a selected one of said plurality of holes for locking said second arm part in a selected rotary position so that said second arm can be rotated with respect to said first arm and locked in a desired selected rotary position.

Ham discloses a measuring apparatus for measuring distances along the body of a damaged vehicle to determine whether the frame has been straightened. *Column 4, lines 11-13.* In the device of Ham, there is at least one tram bar pivotally secured to the center point of a cross bar by a universal coupling, which allows the tram bar to pivot upwardly and downwardly, as well as from side to side. *Column 4, lines 23-28.* The second end of the tram bar includes a probe for contacting various points along the vehicle body as the tram bar is pivoted about the center point of the cross bar. *Column 4, lines 31-34.* The tram bar of Ham may be adjusted in length via an extension member telescopically received within the second end of the bar. *Column 4, lines 34-36.* A clamp permits the user to adjust the distance between the tapered tip of the rod and the tram bar in order to contact points of the vehicle body disposed at different heights while maintaining the tram bar level. *Column 4, lines 45-49.* The device of Ham is intended to be compact and portable within a repair shop. *Column 3, lines 62-65.*

Chisum discloses apparatus and methods in combination with an analog or digital computer for providing the specification and X, Y, and Z coordinates of a plurality of datum check points on a vehicle chassis relative to a given horizontal and vertical plane. *Column 2,*

lines 48-52. The apparatus of Chisum includes a base frame, a lift frame connected to the base frame and means to receive the vehicle on the lift frame. *Column 2, lines 52-55.* In use, a vehicle is driven onto the base frame and lift frame to a certain point and then lifted into the requisite position for measuring and assessment purposes. *Column 6, lines 56-65.*

The Examiner contends that it would have been obvious to one of ordinary skill in the art to add the alignment table, i.e., base frame 22, of Chisum to the measurement unit disclosed by Ham in order to enable the measurement heads of Ham to reach a wider range of vehicle data points.

According to the MPEP, Section 2142, “[T]o establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

The Examiner acknowledges that Ham does not disclose an alignment table to whose fastenings the vehicle is attached for the time of the alignment work and the vertical guide can further be moved in a longitudinal guide.

Applicant submits that in the case at hand, there is no suggestion or motivation in Ham to induce one of ordinary skill in the art to combine that invention with the invention of Chisum. Ham is designed to be a compact and portable device. *See Column 3, lines 62-65 of Ham*. The base frame of Chisum is designed to receive a vehicle. It is intended to be stationary, not portable. There is no motivation or suggestion in Ham that would lead one to reconfigure that

device such that it was attached to the base frame disclosed in Chisum. Doing so would result in eliminating the portable and compact aspects of Ham. Accordingly, the Examiner has not established a *prima facie* case of obviousness, and, therefore, the rejection under 35 USC §103(a) should be dismissed.

The Examiner acknowledges that Ham and Chisum do not disclose the second arm part can turn on its longitudinal axis.

Venalainen '368 discloses a device and method for alignment of an automobile body in which there is a support arm that is capable of rotating around its longitudinal axis.

Applicants contend that even if there were some suggestion or motivation to combine Ham with Chisum, there is absolutely no motivation or suggestion in Ham that would lead one of ordinary skill in the art to modify that invention to include a support arm that is capable of rotating around its longitudinal axis. The device of Ham is designed such that it is easily attached and removed from a vehicle body. It would be unnecessary to provide a rotatable second arm on the device of Ham, because that device is mounted on the vehicle and only needs to measure in one direction. For example, and as elaborated upon in the specification of Ham at Column 7, lines 47-57, if the device of Ham is secured the hood of a car, the probe only needs to measure in a downward direction. Thus, there is no need to provide a probe attached to a second arm that is able to rotate on its longitudinal axis, because there would be nothing to measure in that direction. Accordingly, there is no motivation or suggestion in Ham that would lead one of ordinary skill in the art to modify that invention to include a support arm that is capable of rotating around its longitudinal axis, as disclosed in Venalainen. Therefore, the Examiner has not established a *prima facie* case of obviousness, and the rejection under 35 USC §103 should be dismissed.

The Examiner acknowledges that Ham, Chisum and Venalainen do not disclose any arm part or the measurement head being connected to either the articulation or other arm part via connection assemblies comprising a plurality of spaced holes, each of the holes corresponding to a selected angular or rotary position and ball and spring means for receipt within said a selected one of said plurality of holes for locking said arms in selected angular and rotary positions and locked in said positions.

Weidmann is cited for its disclosure of a coordinate measuring apparatus that is capable of being adjusted into a plurality of angular and rotary position. As discussed with regard to the cited reference of Venalainen, there is absolutely no motivation or suggestion in Ham that a support arm capable of being rotated around its longitudinal axis is necessary or beneficial to that device. Accordingly, the mechanism by which to implement such an unnecessary component is also not suggested in Ham. Accordingly, the Examiner has not established a *prima facie* case of obviousness, and thus, the rejection under 35 USC §103(a) should be dismissed.

Lastly, the Examiner acknowledges that Ham, Chisum, Venalainen & Weidmann do not disclose the step of the measurement head connected to the measurement arm is read and fed into the memory of a computer and that, based on said data fed the result of measurement is at least one of being directly indicated on a display of a computer or said measurement is printed as a measurement record.

The Examiner contends that it would have been obvious to one of ordinary skill in the art to add the steps of obtaining data and displaying the result in order that a user would be able to see the data condition of the vehicle.

Applicant contends that the device of Ham is intended to be portable and uncomplicated. There is absolutely no suggestion or motivation in Ham that would lead one of ordinary skill in

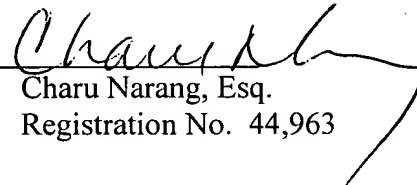
the art to connect that device to computer, for such a modification would eliminate the portability and ease with which the Ham device could be used. Accordingly, the Examiner has failed to establish a *prima facie* case of obviousness, and, thus, the rejection under 35 USC §103(a) should be dismissed.

It is believed that the present amendment is timely. However, if it is determined that this amendment is not timely then this should be considered a petition for an extension of time and the Commissioner for Patents is specifically authorized to charge such fee to Deposit Account No. 50-0518 in the name of Steinberg & Raskin, P.C.

In light of the above remarks, Applicant contends that the application is now in condition for allowance. An early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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